

1. A intra-oral or extra-oral dental restorative material comprising:
a polymeric matrix and a filler component;

wherein said filler component comprises (a) a first plurality of particles having an average particle size of from about 1 to about 10 micrometers; (b) a second plurality of particles having an average particle size of from about 0.1 to about 1 micrometers; and, (c) a plurality of filler particles having an average particle size of from about 0.01 to about 0.04 micrometers.

2. A material as in claim 1, comprising from about 12 to about 25 percent by weight of said polymeric matrix and from about 75 to about 88 percent by weight of said filler component.

3. A material as in claim 1, wherein said polymeric matrix comprises polymerizable unsaturated acidic monomers of a substituted butane moiety with an acid or reactive acid derivative functionality.

4. A material as in claim 1, wherein said polymeric matrix is a photocurable resin.

5. A material as in claim 4, wherein said resin is the reaction product of ethoxylated bisphenol-A-dimethacrylate; Bisphenol-A-Glycidylmethacrylate; triethylene glycol dimethacrylate; and, hexamethylene diisocyanate.

6. A material as in claim 1, wherein said first and second plurality of particles are glass particles.

7. A material as in claim 6, wherein said first and second plurality of glass particles (a) and (b) are the same or different and are selected from the group consisting of glass particles including barium aluminum-borosilicate glass; barium aluminofluorosilicate glass; strontium aluminum-borosilicate glass; strontium aluminofluorosilicate glass; and, mixtures thereof.
8. A material as in claim 7, wherein said plurality of filler particles (c) comprises fumed silica.
9. A material as in claim 8, wherein said filler component comprises from about 10 to about 30 of barium glass particles (a); from about 50 to about 65 of barium glass particles (b); and, from about 10 to about 30 of fumed silica particles (c).
10. A material as in claim 1, having a packability index above about 300 g/mm².
11. A method of restoring a tooth comprises the steps of
preparing a tooth to receive a dental restorative;
packing an amount of said restorative into the prepared tooth; and,
curing said dental restorative material;

wherein said dental restorative material comprises a polymeric matrix and a filler component; said filler component comprising (a) a first plurality of particles having an average particle size of from about 1 to about 10 micrometers; (b) a second plurality of particles having an average particle size of from about 0.1 to about 1 micrometers; and, (c) a plurality of filler particles having an average particle size of from about 0.01 to about 0.04 micrometers.

12. A packaged photosensitive material comprising in combination:
a photosensitive material formed into a unit dose and contained within a container;

said photosensitive material comprising a polymeric matrix and a filler component;

wherein said filler component comprises (a) a first plurality of particles having an average particle size of from about 1 to about 10 micrometers; (b) a second plurality of particles having an average particle size of from about 0.1 to about 1 micrometers; and, (c) a plurality of filler particles having an average particle size of from about 0.01 to about 0.04 micrometers.

13. A packaged material as in claim 12, wherein said container is an open top container and has a base and at least one upstanding wall and has an open area therein;

said at least one upstanding wall having a first end proximate to said base and an end proximate to said open top;

said end proximate to said open top being contiguously formed with a laterally extending web;

a release layer removably fixed to said web and enclosing said open area;

said container and said release layer being substantially non-transmissive of at least a portion of the light spectrum to which the materials are photosensitive;

wherein said unit dose of material is contained within said open area.

14. A packaged material as in claim 12, wherein said container is fabricated from polystyrene, polyethylene terephthalate, polyethylene, polypropylene and mixtures thereof.

15. A method of working with a unit dose of photosensitive material comprising the steps of:

providing the unit dose of material in a package, wherein said material comprises a polymeric matrix and a filler component;

wherein said filler component comprises (a) a first plurality of particles having an average particle size of from about 1 to about 10 micrometers; (b) a second plurality of particles having an average particle size of from about 0.1 to about 1 micrometers; and, (c) a plurality of filler particles having an average particle size of from about 0.01 to about 0.04 micrometers;

said package having an open top container having a base and at least one upstanding wall and having an open area therein;

said at least one upstanding wall having a first end proximate to said base and an end proximate to said open top;

said end proximate to said open top being contiguously formed with a laterally extending web;

a release layer removably fixed to said web and enclosing said open area;

said container and said release layer being substantially non-transmissive of at least a portion of the light spectrum to which the materials are photosensitive;

removing said release layer from said package;

removing the unit dose of material from said package and placing the unit dose of material onto a support surface;

repeatedly removing a selected portion of the unit dose of material and inverting and placing said package over the unit dose of material;

such that light is prevented from contacting the unit dose of material under said package [as said selected portion of the unit dose is employed for its intended purpose.]

16. A method as in claim 15, wherein said release layer is placed onto said support surface, and the unit dose of material is placed onto said placed release layer prior to said step of inverting and placing said package over the unit dose of material.

17. A intra-oral or extra-oral dental restorative material having improved wear properties comprising:

a polymeric matrix and a filler component;

wherein said filler component comprises (a) a first plurality of particles having an average particle size of from about 1 to about 10 micrometers; (b) a second plurality of particles having an average particle size of from about 0.1 to about 1 micrometers; and, (c) a plurality of filler particles having an average particle size of from about 0.01 to about 0.04 micrometers.

18. A method of restoring a tooth or preparing a dental construct comprising the step of sculpting the material of claim 17.

19. An extra-oral dental restorative material having improved wear properties comprising:

a polymeric matrix and a filler component;

wherein said filler component comprises (a) a first plurality of particles having an average particle size of from about 1 to about 10 micrometers; (b) a second plurality of particles having an average particle size of from about 0.1 to about 1 micrometers; and, (c) a plurality of filler particles having an average particle size of from about 0.01 to about 0.04 micrometers; wherein the material is employed as a dental crown, inlay, onlay or veneer.